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Analytical Methodology Summary

Volatile Organics:

Water samples are analyzed for volatile organics by purge and trap GC/MS as specified in EPA Method 624. Solid samples are analyzed for priority pollutant volatile organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8240. Water samples are analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) by GC-PID as specified in EPA Methods 503.1 and 602. Solid samples are analyzed for BTEX as specified in EPA Method 8020.

Acid and Base/Neutral Extractable Organics:

Water samples are analyzed for acid and/or base/neutral extractable organics by GC/MS in accordance with EPA Method 625. Solids are analyzed for acid and/or base/neutral extractable priority pollutants as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8270.

GC/MS Nontarget Compound Analysis:

Analysis for nontarget compounds is conducted, upon request, in conjunction with GC/MS analyses by EPA Methods 624, 625, 8240 and 8270. Nontarget compound analysis is conducted using a forward library search of the EPA/NIH/NBS mass spectral library of compounds at the greatest apparent concentration (10% or greater of the nearest internal standard) in each organic fraction (15 for volatiles, 15 for base/neutrals and 10 for acid extractables).

Organochlorine Pesticides and PCBs:

Water samples are analyzed for organochlorine pesticides and PCBs by dual column gas chromatography with electron capture detectors as specified in EPA Method 608. Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8080.

Total Petroleum Hydrocarbons:

Water samples are analyzed for petroleum hydrocarbons by I.R. using EPA Method 418.1. Solid samples are prepared for analysis by soxhlet extraction consistent with the March 1990 N.J. DEP "Remedial Investigation Guide" Apendix A, page 52, and analyzed by U.S. EPA Method 418.1.

Metals Analysis:

Metals analyses are performed by any of four techniques specified by a Method Code provided on each data report page, as follows:

P - Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP)

A - Flame Atomic Absorption

F - Furnace Atomic Absorption

CV - Manual Cold Vapor (Mercury)

Water samples are digested and analyzed using EPA methods provided in "Methods for Chemical Analysis of Water and Wastewater" (EPA 600/4-79-020). Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition); samples are digested according to Method 3050 "Acid Digestion of Soil, Sediments and Sludges."

Specific method references for ICP analyses are water Method 200.7 and solid Method 6010. Mercury analyses are conducted by the manual cold vapor technique specified by water Method 245.1 and solid Method 7471. Other specific Atomic Absorption method references are as follows:

	Water Test Method		Solid Test Method	
Element	Flame	Furnace	Flame	Furnace
Aluminum	202.1	202.2	7020	--
Antimony	204.1	204.2	7040	7041
Arsenic	--	206.2	--	7060
Barium	208.1	--	7080	--
Beryllium	210.1	210.2	7090	7091
Cadmium	213.1	213.2	7130	7131
Calcium	215.1	--	7140	--
Chromium, Total	218.1	218.2	7190	7191
Chromium, (+6)	218.4	218.5	7197	7195
Cobalt	219.1	219.2	7200	7201
Copper	220.1	220.2	7210	--
Iron	236.1	236.2	7380	--
Lead	239.1	239.2	7420	7421
Magnesium	242.1	--	7450	--
Manganese	243.1	243.2	7460	--
Nickel	249.1	249.2	7520	--
Potassium	258.1	--	7610	--
Selenium	--	270.2	--	7740
Silver	272.1	272.2	7760	--
Sodium	273.1	--	7770	--
Tin	283.1	283.2	7870	--
Thallium	279.1	279.2	7840	7841
Vanadium	286.1	286.2	7910	7911
Zinc	289.1	289.2	7950	--

Cyanide:

Water samples are analyzed for cyanide using EPA Method 335.2. Cyanide is determined in solid samples as specified in the EPA Contract Laboratory Program IFB dated July 1988, revised February 1989.

Phenols:

Water samples are analyzed for total phenols using EPA Method 420.1. Total phenols are determined in solid samples by preparing the sample as outlined in the EPA, Contract Laboratory Program IFB for cyanide, followed by a phenols determination using EPA Method 420.1.

Cleanup of Semivolatile Extracts:

Upon request Method 3611 Alumina Column Cleanup and/or Mehtod 3650 Acid-Base Partition Cleanup are performed to improve detection limits by the removal of saturated hydrocarbon interferences.

Hazardous Waste Characteristics:

Samples for hazardous waste characteristics are analyzed as specified in the U.S. EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition). Specific method references are as follows:

Ignitability - Method 1020

Corrosivity - Water pH Method 9040
Soil pH Method 9045

Reactivity - Chapter 7, Section 7.3.3 and 7.3.4 respectively for hydrogen cyanide and hydrogen sulfide release.

Toxicity - TCLP Method 1311

Miscellaneous Parameters:

Additional analyses performed on both aqueous and solid samples are in accordance with methods published in the following references:

- Test Methods for Evaluating Solid Wastes, SW-846 3rd Edition, November 1986.
- Standard Methods for the Examination of Water and Wastewater, 17th Edition.
- Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979.

DATA REPORTING QUALIFIERS

ND - The compound was not detected at the indicated concentration.

J - Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified detection limit but greater than zero. The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

ENVIROTECH RESEARCH, INC.

J.M. Sorge, Inc.
50 County Line Road
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Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 1173

BTEX

Parameter	Lab No. 73667 Client ID: SS-1 87.5% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Benzene	ND	2.5
Toluene	ND	2.5
Ethyl benzene	220	2.5
p-Xylene	130	2.5
m-Xylene	190	2.5
o-Xylene	49	2.5

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE

VOLATILE ORGANICS

Lab No. 73667
Client ID: SS-1

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Benzene	ND	107	ND	0.5
Carbon tetrachloride	ND	82.7	ND	0.5
Chlorobenzene	ND	97.6	ND	100.0
Chloroform	ND	100	ND	6.0
1,2-Dichloroethane	ND	101	ND	0.5
1,1-Dichloroethylene	ND	111	ND	0.7
Methyl ethyl ketone	ND	109	ND	200.0
Tetrachloroethylene	ND	96.0	ND	0.7
Trichloroethylene	ND	100	ND	0.5
Vinyl chloride	ND	114	ND	0.2

Quantitation Limits: 0.005 mg/l for all compounds, except for methyl ethyl ketone and vinyl chloride which are 0.01 mg/l

Units: Results and Regulatory Levels are in mg/l

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE

EXTRACTABLE ORGANICS

Lab No. 73667
Client ID: SS-1

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
1,4-Dichlorobenzene	ND	67.2	ND	7.5
2,4-Dinitrotoluene	ND	112	ND	0.13
Hexachlorobenzene	ND	110	ND	0.13
Hexachlorobutadiene	ND	58.1	ND	0.5
Hexachloroethane	ND	59.1	ND	3.0
Nitrobenzene	ND	96.3	ND	2.0
Pyridine	ND	92.3	ND	5.0
o-Cresol	ND	100	ND	200.0 (a)
m&p-Cresol	ND	109	ND	200.0 (a)
Pentachlorophenol	ND	118	ND	100.0
2,4,5-Trichlorophenol	ND	115	ND	400.0
2,4,6-Trichlorophenol	ND	109	ND	2.0

Quantitation Limits: 0.04 mg/l for all compounds, except for pyridine which is 0.08 mg/l, and for pentachlorophenol and 2,4,5-trichlorophenol which are 0.20 mg/l

Units: Results and Regulatory Levels are in mg/l

(a) If o-, m-, and p-cresol concentrations can not be differentiated, the total cresol concentration is used. The regulatory level of total cresol is 200 mg/l.

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE

PESTICIDES AND HERBICIDES

Lab No. 73667
Client ID: SS-1

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Chlordane	ND	82	ND	0.03
Endrin	ND	120	ND	0.02
Heptachlor	ND	90	ND	0.008 (b)
Heptachlor epoxide	ND	94	ND	0.008 (b)
Lindane (gamma-BHC)	ND	110	ND	0.4
Methoxychlor	ND	140	ND	10.0
Toxaphene	ND	130	ND	0.5
2,4-D	ND	72	ND	10.0
2,4,5-TP (Silvex)	ND	78	ND	1.0

Quantitation Limits: 0.005 mg/l for chlordane, heptachlor, heptachlor epoxide and lindane; 0.001 mg/l for endrin and methoxychlor; 0.01 mg/l for toxaphene; and 0.008 mg/l for 2,4,-D and 2,4,5-TP

Units: Results and Regulatory Levels are in mg/l

(b) The regulatory level for heptachlor and heptaclor epoxide is for the total of both compounds.

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QA Batch 2024

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

METALS

Lab No. 73667
Client ID: SS-1

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Arsenic	ND	102	ND	5.0
Barium	ND	112	ND	100.0
Cadmium	ND	100	ND	1.0
Chromium	ND	100	ND	5.0
Lead	2.62	95.6	2.74	5.0
Mercury	ND	120	ND	0.2
Selenium	ND	99.0	ND	1.0
Silver	ND	94.0	ND	5.0

Quantitation Limits: 0.5 mg/l for arsenic; 0.2 mg/l chromium, lead, and selenium; 0.10 mg/l for cadmium and silver; 0.0002 mg/l for mercury; and 2.0 mg/l barium;

Units: Results and Regulatory Levels are in mg/l

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N.J. Certified Lab No. 12543

HAZARDOUS WASTE CHARACTERISTICS ANALYSIS

Parameter	Lab No. 73667 Client ID: SS-1 Result (mg/kg)	Maximum Conc. (mg/kg)	Detection Limit (mg/kg)
Sulfide (Reactivity)	ND	500	20
Cyanide (Reactivity)	ND	250	25
Petroleum Hydrocarbons	12700	30000	25
pH 7.22 (standard units)			
Percent Solids 87.5%			
FLASHPOINT	>160^{o}F		

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QA Batch 2030

PCBs

Parameter	Lab No. 73667 Client ID: SS-1 87.5% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
PCB-1016	ND	160
PCB-1221	ND	160
PCB-1232	ND	160
PCB-1242	ND	160
PCB-1248	ND	160
PCB-1254	820	160
PCB-1260	ND	160

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Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 1173

BTEX

Parameter	Lab No. 73668 Client ID: SS-2 88.1% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Benzene	ND	2.5
Toluene	ND	2.5
Ethyl benzene	99	2.5
p-Xylene	12	2.5
m-Xylene	19	2.5
o-Xylene	5.0	2.5

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N.J. Certified Lab No. 12543
QA Batch 2753

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

VOLATILE ORGANICS

Lab No. 73668
Client ID: SS-2

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Benzene	ND	107	ND	0.5
Carbon tetrachloride	ND	82.7	ND	0.5
Chlorobenzene	ND	97.6	ND	100.0
Chloroform	ND	100	ND	6.0
1,2-Dichloroethane	ND	101	ND	0.5
1,1-Dichloroethylene	ND	111	ND	0.7
Methyl ethyl ketone	ND	109	ND	200.0
Tetrachloroethylene	ND	96.0	ND	0.7
Trichloroethylene	ND	100	ND	0.5
Vinyl chloride	ND	114	ND	0.2

Quantitation Limits: 0.005 mg/l for all compounds, except for methyl ethyl ketone and vinyl chloride which are 0.01 mg/l

Units: Results and Regulatory Levels are in mg/l

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BTEX

Parameter	Lab No. 73668 Client ID: SS-2 88.1% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Benzene	ND	2.5
Toluene	ND	2.5
Ethyl benzene	99	2.5
p-Xylene	12	2.5
m-Xylene	19	2.5
o-Xylene	5.0	2.5

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE

VOLATILE ORGANICS

Lab No. 73668
Client ID: SS-2

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Benzene	ND	107	ND	0.5
Carbon tetrachloride	ND	82.7	ND	0.5
Chlorobenzene	ND	97.6	ND	100.0
Chloroform	ND	100	ND	6.0
1,2-Dichloroethane	ND	101	ND	0.5
1,1-Dichloroethylene	ND	111	ND	0.7
Methyl ethyl ketone	ND	109	ND	200.0
Tetrachloroethylene	ND	96.0	ND	0.7
Trichloroethylene	ND	100	ND	0.5
Vinyl chloride	ND	114	ND	0.2

Quantitation Limits: 0.005 mg/l for all compounds, except for methyl ethyl ketone and vinyl chloride which are 0.01 mg/l

Units: Results and Regulatory Levels are in mg/l

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QA Batcth T1057

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

EXTRACTABLE ORGANICS

Lab No. 73668
Client ID: SS-2

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
1,4-Dichlorobenzene	ND	67.2	ND	7.5
2,4-Dinitrotoluene	ND	112	ND	0.13
Hexachlorobenzene	ND	110	ND	0.13
Hexachlorobutadiene	ND	58.1	ND	0.5
Hexachloroethane	ND	59.1	ND	3.0
Nitrobenzene	ND	96.3	ND	2.0
Pyridine	ND	92.3	ND	5.0
o-Cresol	ND	100	ND	200.0(a)
m&p-Cresol	ND	109	ND	200.0(a)
Pentachlorophenol	ND	118	ND	100.0
2,4,5-Trichlorophenol	ND	115	ND	400.0
2,4,6-Trichlorophenol	ND	109	ND	2.0

Quantitation Limits: 0.04 mg/l for all compounds, except for pyridine which is 0.08 mg/l, and for pentachlorophenol and 2,4,5-trichlorophenol which are 0.20 mg/l

Units: Results and Regulatory Levels are in mg/l

(a) If o-, m-, and p-cresol concentrations can not be differentiated, the total cresol concentration is used. The regulatory level of total cresol is 200 mg/l.

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Report Date: 10/15/92
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N.J. Certified Lab No. 12543

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

PESTICIDES AND HERBICIDES

Lab No. 73668
Client ID: SS-2

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Chlordane	ND	82	ND	0.03
Endrin	ND	120	ND	0.02
Heptachlor	ND	90	ND	0.008 (b)
Heptachlor epoxide	ND	94	ND	0.008 (b)
Lindane (gamma-BHC)	ND	110	ND	0.4
Methoxychlor	ND	140	ND	10.0
Toxaphene	ND	130	ND	0.5
2,4-D	ND	72	ND	10.0
2,4,5-TP (Silvex)	ND	78	ND	1.0

Quantitation Limits: 0.005 mg/l for chlordane, heptachlor, heptachlor epoxide and lindane; 0.001 mg/l for endrin and methoxychlor; 0.01 mg/l for toxaphene; and 0.008 mg/l for 2,4,-D and 2,4,5-TP

Units: Results and Regulatory Levels are in mg/l

(b) The regulatory level for heptachlor and heptaclor epoxide is for the total of both compounds.

KHOV005515

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QA Batch 2024

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

METALS

Lab No. 73668
Client ID: SS-2

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Arsenic	ND	102	ND	5.0
Barium	ND	112	ND	100.0
Cadmium	ND	100	ND	1.0
Chromium	ND	100	ND	5.0
Lead	2.32	95.6	2.43	5.0
Mercury	ND	120	ND	0.2
Selenium	ND	99.0	ND	1.0
Silver	ND	94.0	ND	5.0

Quantitation Limits: 0.5 mg/l for arsenic; 0.2 mg/l chromium, lead, and selenium; 0.10 mg/l for cadmium and silver; 0.0002 mg/l for mercury; and 2.0 mg/l barium;

Units: Results and Regulatory Levels are in mg/l

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N.J. Certified Lab No. 12543

HAZARDOUS WASTE CHARACTERISTICS ANALYSIS

Parameter	Lab No. 73668 Client ID: SS-2 Result (mg/kg)	Maximum Conc. (mg/kg)	Detection Limit (mg/kg)
Sulfide (Reactivity)	ND	500	20
Cyanide (Reactivity)	ND	250	25
Petroleum Hydrocarbons	8760	30000	25
pH 7.18 (standard units)			
Percent Solids 88.1%			
FLASHPOINT	>160°F		

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QA Batch 2030

PCBs

Parameter	Lab No. 73668 Client ID: SS-2 88.1% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
PCB-1016	ND	160
PCB-1221	ND	160
PCB-1232	ND	160
PCB-1242	ND	160
PCB-1248	ND	160
PCB-1254	770	160
PCB-1260	ND	160

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QA Batch 1173

BTEX

Parameter	Lab No. 73669 Client ID: SS-3 87.1% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Benzene	ND	2.5
Toluene	ND	2.5
Ethyl benzene	64	2.5
p-Xylene	ND	2.5
m-Xylene	2.9	2.5
o-Xylene	4.9	2.5

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QA Batch 2753

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

VOLATILE ORGANICS

Lab No. 73669
Client ID: SS-3

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Benzene	ND	107	ND	0.5
Carbon tetrachloride	ND	82.7	ND	0.5
Chlorobenzene	ND	97.6	ND	100.0
Chloroform	ND	100	ND	6.0
1,2-Dichloroethane	ND	101	ND	0.5
1,1-Dichloroethylene	ND	111	ND	0.7
Methyl ethyl ketone	ND	109	ND	200.0
Tetrachloroethylene	ND	96.0	ND	0.7
Trichloroethylene	ND	100	ND	0.5
Vinyl chloride	ND	114	ND	0.2

Quantitation Limits: 0.005 mg/l for all compounds, except for methyl ethyl ketone and vinyl chloride which are 0.01 mg/l

Units: Results and Regulatory Levels are in mg/l

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N.J. Certified Lab No. 12543
QA Batcth T1057

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

EXTRACTABLE ORGANICS

Lab No. 73669
Client ID: SS-3

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
1,4-Dichlorobenzene	ND	67.2	ND	7.5
2,4-Dinitrotoluene	ND	112	ND	0.13
Hexachlorobenzene	ND	110	ND	0.13
Hexachlorobutadiene	ND	58.1	ND	0.5
Hexachloroethane	ND	59.1	ND	3.0
Nitrobenzene	ND	96.3	ND	2.0
Pyridine	ND	92.3	ND	5.0
o-Cresol	ND	100	ND	200.0 (a)
m&p-Cresol	ND	109	ND	200.0 (a)
Pentachlorophenol	ND	118	ND	100.0
2,4,5-Trichlorophenol	ND	115	ND	400.0
2,4,6-Trichlorophenol	ND	109	ND	2.0

Quantitation Limits: 0.04 mg/l for all compounds, except for pyridine which is 0.08 mg/l, and for pentachlorophenol and 2,4,5-trichlorophenol which are 0.20 mg/l

Units: Results and Regulatory Levels are in mg/l

(a) If o-, m-, and p-cresol concentrations can not be differentiated, the total cresol concentration is used. The regulatory level of total cresol is 200 mg/l.

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE

PESTICIDES AND HERBICIDES

Lab No. 73669
Client ID: SS-3

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Chlordane	ND	82	ND	0.03
Endrin	ND	120	ND	0.02
Heptachlor	ND	90	ND	0.008 (b)
Heptachlor epoxide	ND	94	ND	0.008 (b)
Lindane (gamma-BHC)	ND	110	ND	0.4
Methoxychlor	ND	140	ND	10.0
Toxaphene	ND	130	ND	0.5
2,4-D	ND	72	ND	10.0
2,4,5-TP (Silvex)	ND	78	ND	1.0

Quantitation Limits: 0.005 mg/l for chlordane, heptachlor, heptachlor epoxide and lindane; 0.001 mg/l for endrin and methoxychlor; 0.01 mg/l for toxaphene; and 0.008 mg/l for 2,4,-D and 2,4,5-TP

Units: Results and Regulatory Levels are in mg/l

(b) The regulatory level for heptachlor and heptaclor epoxide is for the total of both compounds.

ENVIROTECH RESEARCH, INC.

J.M. Sorge, Inc.
50 County Line Road
Somerville, NJ 08876
Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

PESTICIDES AND HERBICIDES

Lab No. 73670
Client ID: SS-4

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Chlordane	ND	82	ND	0.03
Endrin	ND	120	ND	0.02
Heptachlor	ND	90	ND	0.008 (b)
Heptachlor epoxide	ND	94	ND	0.008 (b)
Lindane (gamma-BHC)	ND	110	ND	0.4
Methoxychlor	ND	140	ND	10.0
Toxaphene	ND	130	ND	0.5
2,4-D	ND	72	ND	10.0
2,4,5-TP (Silvex)	ND	78	ND	1.0

Quantitation Limits: 0.005 mg/l for chlordane, heptachlor, heptachlor epoxide and lindane; 0.001 mg/l for endrin and methoxychlor; 0.01 mg/l for toxaphene; and 0.008 mg/l for 2,4,-D and 2,4,5-TP

Units: Results and Regulatory Levels are in mg/l

(b) The regulatory level for heptachlor and heptaclor epoxide is for the total of both compounds.

J.M. Sorge, Inc.
50 County Line Road
Somerville, NJ 08876
Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 2024

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

METALS

Lab No. 73670
Client ID: SS-4

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Arsenic	ND	102	ND	5.0
Barium	2.1	112	1.9	100.0
Cadmium	ND	100	ND	1.0
Chromium	ND	100	ND	5.0
Lead	1.7	95.6	1.8	5.0
Mercury	ND	120	ND	0.2
Selenium	ND	99.0	ND	1.0
Silver	ND	94.0	ND	5.0

Quantitation Limits: 0.5 mg/l for arsenic; 0.2 mg/l chromium, lead, and selenium; 0.10 mg/l for cadmium and silver; 0.0002 mg/l for mercury; and 2.0 mg/l barium;

Units: Results and Regulatory Levels are in mg/l

ENVIROTECH RESEARCH, INC.

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50 County Line Road
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Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543

HAZARDOUS WASTE CHARACTERISTICS ANALYSIS

Parameter	Lab No. 73670 Client ID: SS-4 Result (mg/kg)	Maximum Conc. (mg/kg)	Detection Limit (mg/kg)
Sulfide (Reactivity)	ND	500	20
Cyanide (Reactivity)	ND	250	25
Petroleum Hydrocarbons	3310	30000	25
pH 7.44 (standard units)			
Percent Solids 88.5%			
FLASHPOINT	>160^{o}F		

J.M. Sorge, Inc.
50 County Line Road
Somerville, NJ 08876
Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 2030

PCBs

Parameter	Lab No. 73670 Client ID: SS-4 88.5% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
PCB-1016	ND	160
PCB-1221	ND	160
PCB-1232	ND	160
PCB-1242	ND	160
PCB-1248	ND	160
PCB-1254	520	160
PCB-1260	ND	160

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50 County Line Road
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Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 1174

BTEX

Parameter	Lab No. 73671 Client ID: SS-5 86.9% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Benzene	150	50
Toluene	150	50
Ethyl benzene	800	50
p-Xylene	420	50
m-Xylene	660	50
o-Xylene	390	50

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Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 2753

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

VOLATILE ORGANICS

Lab No. 73671
Client ID: SS-5

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Benzene	ND	107	ND	0.5
Carbon tetrachloride	ND	82.7	ND	0.5
Chlorobenzene	ND	97.6	ND	100.0
Chloroform	ND	100	ND	6.0
1,2-Dichloroethane	ND	101	ND	0.5
1,1-Dichloroethylene	ND	111	ND	0.7
Methyl ethyl ketone	ND	109	ND	200.0
Tetrachloroethylene	ND	96.0	ND	0.7
Trichloroethylene	ND	100	ND	0.5
Vinyl chloride	ND	114	ND	0.2

Quantitation Limits: 0.005 mg/l for all compounds, except for methyl ethyl ketone and vinyl chloride which are 0.01 mg/l

Units: Results and Regulatory Levels are in mg/l

J.M. Sorge, Inc.
50 County Line Road
Somerville, NJ 08876
Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batcth T1057

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

EXTRACTABLE ORGANICS

Lab No. 73671
Client ID: SS-5

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
1,4-Dichlorobenzene	ND	67.2	ND	7.5
2,4-Dinitrotoluene	ND	112	ND	0.13
Hexachlorobenzene	ND	110	ND	0.13
Hexachlorobutadiene	ND	58.1	ND	0.5
Hexachloroethane	ND	59.1	ND	3.0
Nitrobenzene	ND	96.3	ND	2.0
Pyridine	ND	92.3	ND	5.0
o-Cresol	ND	100	ND	200.0(a)
m&p-Cresol	ND	109	ND	200.0(a)
Pentachlorophenol	ND	118	ND	100.0
2,4,5-Trichlorophenol	ND	115	ND	400.0
2,4,6-Trichlorophenol	ND	109	ND	2.0

Quantitation Limits: 0.04 mg/l for all compounds, except for pyridine which is 0.08 mg/l, and for pentachlorophenol and 2,4,5-trichlorophenol which are 0.20 mg/l

Units: Results and Regulatory Levels are in mg/l

(a) If o-, m-, and p-cresol concentrations can not be differentiated, the total cresol concentration is used. The regulatory level of total cresol is 200 mg/l.

J.M. Sorge, Inc.
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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

PESTICIDES AND HERBICIDES

Lab No. 73671
Client ID: SS-5

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Chlordane	ND	82	ND	0.03
Endrin	ND	120	ND	0.02
Heptachlor	ND	90	ND	0.008 (b)
Heptachlor epoxide	ND	94	ND	0.008 (b)
Lindane (gamma-BHC)	ND	110	ND	0.4
Methoxychlor	ND	140	ND	10.0
Toxaphene	ND	130	ND	0.5
2,4-D	ND	72	ND	10.0
2,4,5-TP (Silvex)	ND	78	ND	1.0

Quantitation Limits: 0.005 mg/l for chlordane, heptachlor, heptachlor epoxide and lindane; 0.001 mg/l for endrin and methoxychlor; 0.01 mg/l for toxaphene; and 0.008 mg/l for 2,4,-D and 2,4,5-TP

Units: Results and Regulatory Levels are in mg/l

(b) The regulatory level for heptachlor and heptaclor epoxide is for the total of both compounds.

J.M. Sorge, Inc.
50 County Line Road
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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 2024

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

METALS

Lab No. 73671
Client ID: SS-5

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Arsenic	ND	102	ND	5.0
Barium	ND	112	ND	100.0
Cadmium	ND	100	ND	1.0
Chromium	ND	100	ND	5.0
Lead	ND	95.6	ND	5.0
Mercury	0.00021	120	0.00018	0.2
Selenium	ND	99.0	ND	1.0
Silver	ND	94.0	ND	5.0

Quantitation Limits: 0.5 mg/l for arsenic; 0.2 mg/l chromium, lead, and selenium; 0.10 mg/l for cadmium and silver; 0.0002 mg/l for mercury; and 2.0 mg/l barium;

Units: Results and Regulatory Levels are in mg/l

J.M. Sorge, Inc.
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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543

HAZARDOUS WASTE CHARACTERISTICS ANALYSIS

Parameter	Lab No. 73671 Client ID: SS-5 Result (mg/kg)	Maximum Conc. (mg/kg)	Detection Limit (mg/kg)
Sulfide (Reactivity)	ND	500	20
Cyanide (Reactivity)	ND	250	25
Petroleum Hydrocarbons	220	30000	25
pH 7.78 (standard units)			
Percent Solids 86.9%			
FLASHPOINT	>160°F		

ENVIROTECH RESEARCH, INC.

J.M. Sorge, Inc.
50 County Line Road
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Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 2030

PCBs

Parameter	Lab No. 73671 Client ID: SS-5 86.9% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
PCB-1016	ND	160
PCB-1221	ND	160
PCB-1232	ND	160
PCB-1242	ND	160
PCB-1248	ND	160
PCB-1254	ND	160
PCB-1260	ND	160

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Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 1174

BTEX

Parameter	Lab No. 73672 Client ID: SS-6 88.4% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Benzene	190	50
Toluene	120	50
Ethyl benzene	540	50
p-Xylene	240	50
m-Xylene	390	50
o-Xylene	190	50

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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 2753

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

VOLATILE ORGANICS

Lab No. 73672
Client ID: SS-6

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Benzene	ND	107	ND	0.5
Carbon tetrachloride	ND	82.7	ND	0.5
Chlorobenzene	ND	97.6	ND	100.0
Chloroform	ND	100	ND	6.0
1,2-Dichloroethane	ND	101	ND	0.5
1,1-Dichloroethylene	ND	111	ND	0.7
Methyl ethyl ketone	ND	109	ND	200.0
Tetrachloroethylene	ND	96.0	ND	0.7
Trichloroethylene	ND	100	ND	0.5
Vinyl chloride	ND	114	ND	0.2

Quantitation Limits: 0.005 mg/l for all compounds, except for methyl ethyl ketone and vinyl chloride which are 0.01 mg/l

Units: Results and Regulatory Levels are in mg/l

J.M. Sorge, Inc.
50 County Line Road
Somerville, NJ 08876
Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batcth T1057

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

EXTRACTABLE ORGANICS

Lab No. 73672
Client ID: SS-6

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
1,4-Dichlorobenzene	ND	67.2	ND	7.5
2,4-Dinitrotoluene	ND	112	ND	0.13
Hexachlorobenzene	ND	110	ND	0.13
Hexachlorobutadiene	ND	58.1	ND	0.5
Hexachloroethane	ND	59.1	ND	3.0
Nitrobenzene	ND	96.3	ND	2.0
Pyridine	ND	92.3	ND	5.0
o-Cresol	ND	100	ND	200.0(a)
m&p-Cresol	ND	109	ND	200.0(a)
Pentachlorophenol	ND	118	ND	100.0
2,4,5-Trichlorophenol	ND	115	ND	400.0
2,4,6-Trichlorophenol	ND	109	ND	2.0

Quantitation Limits: 0.04 mg/l for all compounds, except for pyridine which is 0.08 mg/l, and for pentachlorophenol and 2,4,5-trichlorophenol which are 0.20 mg/l

Units: Results and Regulatory Levels are in mg/l

(a) If o-, m-, and p-cresol concentrations can not be differentiated, the total cresol concentration is used. The regulatory level of total cresol is 200 mg/l.

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50 County Line Road
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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

PESTICIDES AND HERBICIDES

Lab No. 73672
Client ID: SS-6

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Chlordane	ND	82	ND	0.03
Endrin	ND	120	ND	0.02
Heptachlor	ND	90	ND	0.008 (b)
Heptachlor epoxide	ND	94	ND	0.008 (b)
Lindane (gamma-BHC)	ND	110	ND	0.4
Methoxychlor	ND	140	ND	10.0
Toxaphene	ND	130	ND	0.5
2,4-D	ND	72	ND	10.0
2,4,5-TP (Silvex)	ND	78	ND	1.0

Quantitation Limits: 0.005 mg/l for chlordane, heptachlor, heptachlor epoxide and lindane; 0.001 mg/l for endrin and methoxychlor; 0.01 mg/l for toxaphene; and 0.008 mg/l for 2,4,-D and 2,4,5-TP

Units: Results and Regulatory Levels are in mg/l

(b) The regulatory level for heptachlor and heptaclor epoxide is for the total of both compounds.

J.M. Sorge, Inc.
50 County Line Road
Somerville, NJ 08876
Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 2024

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

METALS

Lab No. 73672
Client ID: SS-6

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Arsenic	ND	102	ND	5.0
Barium	ND	112	ND	100.0
Cadmium	ND	100	ND	1.0
Chromium	ND	100	ND	5.0
Lead	ND	95.6	ND	5.0
Mercury	ND	120	ND	0.2
Selenium	ND	99.0	ND	1.0
Silver	ND	94.0	ND	5.0

Quantitation Limits: 0.5 mg/l for arsenic; 0.2 mg/l chromium, lead, and selenium; 0.10 mg/l for cadmium and silver; 0.0002 mg/l for mercury; and 2.0 mg/l barium;

Units: Results and Regulatory Levels are in mg/l

ENVIROTECH RESEARCH, INC.

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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543

HAZARDOUS WASTE CHARACTERISTICS ANALYSIS

Parameter	Lab No. 73672 Client ID: SS-6 Result (mg/kg)	Maximum Conc. (mg/kg)	Detection Limit (mg/kg)
Sulfide (Reactivity)	ND	500	20
Cyanide (Reactivity)	ND	250	25
Petroleum Hydrocarbons	170	30000	25
pH 7.88 (standard units)			
Percent Solids 88.4%			
FLASHPOINT	>160°F		

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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 2030

PCBs

Parameter	Lab No. 73672 Client ID: SS-6 88.4% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
PCB-1016	ND	160
PCB-1221	ND	160
PCB-1232	ND	160
PCB-1242	ND	160
PCB-1248	ND	160
PCB-1254	ND	160
PCB-1260	ND	160

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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 1174

BTEX

Parameter	Lab No. 73673 Client ID: SS-7 86.4% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Benzene	130	50
Toluene	ND	50
Ethyl benzene	290	50
p-Xylene	100	50
m-Xylene	190	50
o-Xylene	77	50

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Report Date: 10/15/92
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N.J. Certified Lab No. 12543
QA Batch 2753

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

VOLATILE ORGANICS

Lab No. 73673
Client ID: SS-7

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Benzene	ND	107	ND	0.5
Carbon tetrachloride	ND	82.7	ND	0.5
Chlorobenzene	ND	97.6	ND	100.0
Chloroform	ND	100	ND	6.0
1,2-Dichloroethane	ND	101	ND	0.5
1,1-Dichloroethylene	ND	111	ND	0.7
Methyl ethyl ketone	ND	109	ND	200.0
Tetrachloroethylene	ND	96.0	ND	0.7
Trichloroethylene	ND	100	ND	0.5
Vinyl chloride	ND	114	ND	0.2

Quantitation Limits: 0.005 mg/l for all compounds, except for methyl ethyl ketone and vinyl chloride which are 0.01 mg/l

Units: Results and Regulatory Levels are in mg/l

J.M. Sorge, Inc.
50 County Line Road
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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batcth T1057

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

EXTRACTABLE ORGANICS

Lab No. 73673
Client ID: SS-7

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
1,4-Dichlorobenzene	ND	67.2	ND	7.5
2,4-Dinitrotoluene	ND	112	ND	0.13
Hexachlorobenzene	ND	110	ND	0.13
Hexachlorobutadiene	ND	58.1	ND	0.5
Hexachloroethane	ND	59.1	ND	3.0
Nitrobenzene	ND	96.3	ND	2.0
Pyridine	ND	92.3	ND	5.0
o-Cresol	ND	100	ND	200.0[a]
m&p-Cresol	ND	109	ND	200.0[a]
Pentachlorophenol	ND	118	ND	100.0
2,4,5-Trichlorophenol	ND	115	ND	400.0
2,4,6-Trichlorophenol	ND	109	ND	2.0

Quantitation Limits: 0.04 mg/l for all compounds, except for pyridine which is 0.08 mg/l, and for pentachlorophenol and 2,4,5-trichlorophenol which are 0.20 mg/l

Units: Results and Regulatory Levels are in mg/l

(a) If o-, m-, and p-cresol concentrations can not be differentiated, the total cresol concentration is used. The regulatory level of total cresol is 200 mg/l.

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Report Date: 10/15/92
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N.J. Certified Lab No. 12543

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

PESTICIDES AND HERBICIDES

Lab No. 73673
Client ID: SS-7

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Chlordane	ND	82	ND	0.03
Endrin	ND	120	ND	0.02
Heptachlor	ND	90	ND	0.008 (b)
Heptachlor epoxide	ND	94	ND	0.008 (b)
Lindane (gamma-BHC)	ND	110	ND	0.4
Methoxychlor	ND	140	ND	10.0
Toxaphene	ND	130	ND	0.5
2,4-D	ND	72	ND	10.0
2,4,5-TP (Silvex)	ND	78	ND	1.0

Quantitation Limits: 0.005 mg/l for chlordane, heptachlor, heptachlor epoxide and lindane; 0.001 mg/l for endrin and methoxychlor; 0.01 mg/l for toxaphene; and 0.008 mg/l for 2,4,-D and 2,4,5-TP

Units: Results and Regulatory Levels are in mg/l

(b) The regulatory level for heptachlor and heptaclor epoxide is for the total of both compounds.

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N.J. Certified Lab No. 12543
QA Batch 2024

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

METALS

Lab No. 73673
Client ID: SS-7

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Arsenic	ND	102	ND	5.0
Barium	ND	112	ND	100.0
Cadmium	ND	100	ND	1.0
Chromium	ND	100	ND	5.0
Lead	0.76	95.6	0.79	5.0
Mercury	ND	120	ND	0.2
Selenium	ND	99.0	ND	1.0
Silver	ND	94.0	ND	5.0

Quantitation Limits: 0.5 mg/l for arsenic; 0.2 mg/l chromium, lead, and selenium; 0.10 mg/l for cadmium and silver; 0.0002 mg/l for mercury; and 2.0 mg/l barium;

Units: Results and Regulatory Levels are in mg/l

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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543

HAZARDOUS WASTE CHARACTERISTICS ANALYSIS

Parameter	Lab No. 73673 Client ID: SS-7 Result (mg/kg)	Maximum Conc. (mg/kg)	Detection Limit (mg/kg)
Sulfide (Reactivity)	ND	500	20
Cyanide (Reactivity)	ND	250	25
Petroleum Hydrocarbons	700	30000	25
pH 7.67 (standard units)			
Percent Solids 86.4%			
FLASHPOINT	>160°F		

J.M. Sorge, Inc.
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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 2030

PCBs

Parameter	Lab No. 73673 Client ID: SS-7 86.4% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
PCB-1016	ND	160
PCB-1221	ND	160
PCB-1232	ND	160
PCB-1242	ND	160
PCB-1248	ND	160
PCB-1254	ND	160
PCB-1260	ND	160

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QA Batch 1173

BTEX

Parameter	Lab No. 73674 Client ID: SS-8 94.7% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Benzene	ND	2.5
Toluene	ND	2.5
Ethyl benzene	85	2.5
p-Xylene	ND	2.5
m-Xylene	ND	2.5
o-Xylene	ND	2.5

J.M. Sorge, Inc.
50 County Line Road
Somerville, NJ 08876
Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 2753

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

VOLATILE ORGANICS

Lab No. 73674
Client ID: SS-8

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Benzene	ND	107	ND	0.5
Carbon tetrachloride	ND	82.7	ND	0.5
Chlorobenzene	ND	97.6	ND	100.0
Chloroform	ND	100	ND	6.0
1,2-Dichloroethane	ND	101	ND	0.5
1,1-Dichloroethylene	ND	111	ND	0.7
Methyl ethyl ketone	ND	109	ND	200.0
Tetrachloroethylene	ND	96.0	ND	0.7
Trichloroethylene	0.013	100	0.013	0.5
Vinyl chloride	ND	114	ND	0.2

Quantitation Limits: 0.005 mg/l for all compounds, except for methyl ethyl ketone and vinyl chloride which are 0.01 mg/l

Units: Results and Regulatory Levels are in mg/l

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50 County Line Road
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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batcth T1057

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

EXTRACTABLE ORGANICS

Lab No. 73674
Client ID: SS-8

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
1,4-Dichlorobenzene	ND	67.2	ND	7.5
2,4-Dinitrotoluene	ND	112	ND	0.13
Hexachlorobenzene	ND	110	ND	0.13
Hexachlorobutadiene	ND	58.1	ND	0.5
Hexachloroethane	ND	59.1	ND	3.0
Nitrobenzene	ND	96.3	ND	2.0
Pyridine	ND	92.3	ND	5.0
o-Cresol	ND	100	ND	200.0(a)
m&p-Cresol	ND	109	ND	200.0(a)
Pentachlorophenol	ND	118	ND	100.0
2,4,5-Trichlorophenol	ND	115	ND	400.0
2,4,6-Trichlorophenol	ND	109	ND	2.0

Quantitation Limits: 0.04 mg/l for all compounds, except for pyridine which is 0.08 mg/l, and for pentachlorophenol and 2,4,5-trichlorophenol which are 0.20 mg/l

Units: Results and Regulatory Levels are in mg/l

(a) If o-, m-, and p-cresol concentrations can not be differentiated, the total cresol concentration is used. The regulatory level of total cresol is 200 mg/l.

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Report Date: 10/15/92
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TOXICITY CHARACTERISTIC LEACHING PROCEDURE

PESTICIDES AND HERBICIDES

Lab No. 73674
Client ID: SS-8

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Chlordane	ND	82	ND	0.03
Endrin	ND	120	ND	0.02
Heptachlor	ND	90	ND	0.008 (b)
Heptachlor epoxide	ND	94	ND	0.008 (b)
Lindane (gamma-BHC)	ND	110	ND	0.4
Methoxychlor	ND	140	ND	10.0
Toxaphene	ND	130	ND	0.5
2,4-D	ND	72	ND	10.0
2,4,5-TP (Silvex)	ND	78	ND	1.0

Quantitation Limits: 0.005 mg/l for chlordane, heptachlor, heptachlor epoxide and lindane; 0.001 mg/l for endrin and methoxychlor; 0.01 mg/l for toxaphene; and 0.008 mg/l for 2,4,-D and 2,4,5-TP

Units: Results and Regulatory Levels are in mg/l

(b) The regulatory level for heptachlor and heptaclor epoxide is for the total of both compounds.

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Report Date: 10/15/92
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N.J. Certified Lab No. 12543
QA Batch 2024

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

METALS

Lab No. 73674
Client ID: SS-8

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Arsenic	ND	102	ND	5.0
Barium	ND	112	ND	100.0
Cadmium	ND	100	ND	1.0
Chromium	ND	100	ND	5.0
Lead	0.38	95.6	0.40	5.0
Mercury	ND	120	ND	0.2
Selenium	ND	99.0	ND	1.0
Silver	ND	94.0	ND	5.0

Quantitation Limits: 0.5 mg/l for arsenic; 0.2 mg/l chromium, lead, and selenium; 0.10 mg/l for cadmium and silver; 0.0002 mg/l for mercury; and 2.0 mg/l barium;

Units: Results and Regulatory Levels are in mg/l

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Report Date: 10/15/92
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N.J. Certified Lab No. 12543

HAZARDOUS WASTE CHARACTERISTICS ANALYSIS

Parameter	Lab No. 73674 Client ID: SS-8 Result (mg/kg)	Maximum Conc. (mg/kg)	Detection Limit (mg/kg)
Sulfide (Reactivity)	ND	500	20
Cyanide (Reactivity)	ND	250	25
Petroleum Hydrocarbons	160	30000	25
pH 8.28 (standard units)			
Percent Solids 94.7%			
FLASHPOINT	>160°F		

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Report Date: 10/15/92
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QA Batch 2030

PCBs

Parameter	Lab No. 73674 Client ID: SS-8 94.7% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
PCB-1016	ND	160
PCB-1221	ND	160
PCB-1232	ND	160
PCB-1242	ND	160
PCB-1248	ND	160
PCB-1254	170	160
PCB-1260	ND	160

ENVIROTECH RESEARCH, INC.

J.M. Sorge, Inc.
50 County Line Road
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Attention: Mr. Chris Finley

Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 1173

BTEX

Parameter	Lab No. 73675 Client ID: SS-9 93.8% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Benzene	ND	2.5
Toluene	ND	2.5
Ethyl benzene	11	2.5
p-Xylene	ND	2.5
m-Xylene	ND	2.5
o-Xylene	ND	2.5

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QA Batch 2753

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

VOLATILE ORGANICS

Lab No. 73675
Client ID: SS-9

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Benzene	ND	107	ND	0.5
Carbon tetrachloride	ND	82.7	ND	0.5
Chlorobenzene	ND	97.6	ND	100.0
Chloroform	ND	100	ND	6.0
1,2-Dichloroethane	ND	101	ND	0.5
1,1-Dichloroethylene	ND	111	ND	0.7
Methyl ethyl ketone	ND	109	ND	200.0
Tetrachloroethylene	ND	96.0	ND	0.7
Trichloroethylene	ND	100	ND	0.5
Vinyl chloride	ND	114	ND	0.2

Quantitation Limits: 0.005 mg/l for all compounds, except for methyl ethyl ketone and vinyl chloride which are 0.01 mg/l

Units: Results and Regulatory Levels are in mg/l

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N.J. Certified Lab No. 12543
QA Batcth T1057

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

EXTRACTABLE ORGANICS

Lab No. 73675
Client ID: SS-9

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
1,4-Dichlorobenzene	ND	67.2	ND	7.5
2,4-Dinitrotoluene	ND	112	ND	0.13
Hexachlorobenzene	ND	110	ND	0.13
Hexachlorobutadiene	ND	58.1	ND	0.5
Hexachloroethane	ND	59.1	ND	3.0
Nitrobenzene	ND	96.3	ND	2.0
Pyridine	ND	92.3	ND	5.0
o-Cresol	ND	100	ND	200.0 (a)
m&p-Cresol	ND	109	ND	200.0 (a)
Pentachlorophenol	ND	118	ND	100.0
2,4,5-Trichlorophenol	ND	115	ND	400.0
2,4,6-Trichlorophenol	ND	109	ND	2.0

Quantitation Limits: 0.04 mg/l for all compounds, except for pyridine which is 0.08 mg/l, and for pentachlorophenol and 2,4,5-trichlorophenol which are 0.20 mg/l

Units: Results and Regulatory Levels are in mg/l

(a) If o-, m-, and p-cresol concentrations can not be differentiated, the total cresol concentration is used. The regulatory level of total cresol is 200 mg/l.

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE

PESTICIDES AND HERBICIDES

Lab No. 73675
Client ID: SS-9

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Chlordane	ND	82	ND	0.03
Endrin	ND	120	ND	0.02
Heptachlor	ND	90	ND	0.008 (b)
Heptachlor epoxide	ND	94	ND	0.008 (b)
Lindane (gamma-BHC)	ND	110	ND	0.4
Methoxychlor	ND	140	ND	10.0
Toxaphene	ND	130	ND	0.5
2,4-D	ND	72	ND	10.0
2,4,5-TP (Silvex)	ND	78	ND	1.0

Quantitation Limits: 0.005 mg/l for chlordane, heptachlor, heptachlor epoxide and lindane; 0.001 mg/l for endrin and methoxychlor; 0.01 mg/l for toxaphene; and 0.008 mg/l for 2,4,-D and 2,4,5-TP

Units: Results and Regulatory Levels are in mg/l

(b) The regulatory level for heptachlor and heptaclor epoxide is for the total of both compounds.

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Report Date: 10/15/92
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N.J. Certified Lab No. 12543
QA Batch 2024

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

METALS

Lab No. 73675
Client ID: SS-9

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Arsenic	ND	102	ND	5.0
Barium	ND	112	ND	100.0
Cadmium	ND	100	ND	1.0
Chromium	ND	100	ND	5.0
Lead	ND	95.6	ND	5.0
Mercury	ND	120	ND	0.2
Selenium	ND	99.0	ND	1.0
Silver	ND	94.0	ND	5.0

Quantitation Limits: 0.5 mg/l for arsenic; 0.2 mg/l chromium, lead, and selenium; 0.10 mg/l for cadmium and silver; 0.0002 mg/l for mercury; and 2.0 mg/l barium;

Units: Results and Regulatory Levels are in mg/l

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N.J. Certified Lab No. 12543

HAZARDOUS WASTE CHARACTERISTICS ANALYSIS

Parameter	Lab No. 73675 Client ID: SS-9 Result (mg/kg)	Maximum Conc. (mg/kg)	Detection Limit (mg/kg)
Sulfide (Reactivity)	ND	500	20
Cyanide (Reactivity)	ND	250	25
Petroleum Hydrocarbons	368	30000	25
pH 8.37 (standard units)			
Percent Solids 93.8%			
FLASHPOINT	>160°F		

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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batch 2030

PCBs

Parameter	Lab No. 73675 Client ID: SS-9 93.8% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
PCB-1016	ND	160
PCB-1221	ND	160
PCB-1232	ND	160
PCB-1242	ND	160
PCB-1248	ND	160
PCB-1254	ND	160
PCB-1260	ND	160

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Report Date: 10/15/92
Job No.: C494 - Hovnanian
N.J. Certified Lab No. 12543
QA Batcth T1057

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

EXTRACTABLE ORGANICS

Lab No. 73676
Client ID: SS-10

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
1,4-Dichlorobenzene	ND	67.2	ND	7.5
2,4-Dinitrotoluene	ND	112	ND	0.13
Hexachlorobenzene	ND	110	ND	0.13
Hexachlorobutadiene	ND	58.1	ND	0.5
Hexachloroethane	ND	59.1	ND	3.0
Nitrobenzene	ND	96.3	ND	2.0
Pyridine	ND	92.3	ND	5.0
o-Cresol	ND	100	ND	200.0[a]
m&p-Cresol	ND	109	ND	200.0[a]
Pentachlorophenol	ND	118	ND	100.0
2,4,5-Trichlorophenol	ND	115	ND	400.0
2,4,6-Trichlorophenol	ND	109	ND	2.0

Quantitation Limits: 0.04 mg/l for all compounds, except for pyridine which is 0.08 mg/l, and for pentachlorophenol and 2,4,5-trichlorophenol which are 0.20 mg/l

Units: Results and Regulatory Levels are in mg/l

(a) If o-, m-, and p-cresol concentrations can not be differentiated, the total cresol concentration is used. The regulatory level of total cresol is 200 mg/l.

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE

PESTICIDES AND HERBICIDES

Lab No. 73676
Client ID: SS-10

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Chlordane	ND	82	ND	0.03
Endrin	ND	120	ND	0.02
Heptachlor	ND	90	ND	0.008 (b)
Heptachlor epoxide	ND	94	ND	0.008 (b)
Lindane (gamma-BHC)	ND	110	ND	0.4
Methoxychlor	ND	140	ND	10.0
Toxaphene	ND	130	ND	0.5
2,4-D	ND	72	ND	10.0
2,4,5-TP (Silvex)	ND	78	ND	1.0

Quantitation Limits: 0.005 mg/l for chlordane, heptachlor, heptachlor epoxide and lindane; 0.001 mg/l for endrin and methoxychlor; 0.01 mg/l for toxaphene; and 0.008 mg/l for 2,4,-D and 2,4,5-TP

Units: Results and Regulatory Levels are in mg/l

(b) The regulatory level for heptachlor and heptaclor epoxide is for the total of both compounds.

ENVIROTECH RESEARCH, INC.

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE

METALS

Lab No. 73676
Client ID: SS-10

Parameter	Result	Matrix Spike % Recovery	Bias Corrected Result	Regulatory Level
Arsenic	ND	102	ND	5.0
Barium	ND	112	ND	100.0
Cadmium	ND	100	ND	1.0
Chromium	ND	100	ND	5.0
Lead	0.33	95.6	0.35	5.0
Mercury	ND	120	ND	0.2
Selenium	ND	99.0	ND	1.0
Silver	ND	94.0	ND	5.0

Quantitation Limits: 0.5 mg/l for arsenic; 0.2 mg/l chromium, lead, and selenium; 0.10 mg/l for cadmium and silver; 0.0002 mg/l for mercury; and 2.0 mg/l barium;

Units: Results and Regulatory Levels are in mg/l

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HAZARDOUS WASTE CHARACTERISTICS ANALYSIS

Parameter	Lab No. 73676 Client ID: SS-10 Result (mg/kg)	Maximum Conc. (mg/kg)	Detection Limit (mg/kg)
Sulfide (Reactivity)	ND	500	20
Cyanide (Reactivity)	ND	250	25
Petroleum Hydrocarbons	92	30000	25
pH 7.95 (standard units)			
Percent Solids 90.9%			
FLASHPOINT	>160°F		

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QA Batch 2030

PCBs

Parameter	Lab No. 73676 Client ID: SS-10 90.9% Solid Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
PCB-1016	ND	160
PCB-1221	ND	160
PCB-1232	ND	160
PCB-1242	ND	160
PCB-1248	ND	160
PCB-1254	ND	160
PCB-1260	ND	160